



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of: Gu, Wei

Serial No.: 09/851,595

Filed: May 8, 2001

For: NOVEL G-PROTEIN COUPLED RECEPTORS  
AND USES THEREFOR

Attorney Docket No.: MNI-080CP

Group Art Unit: 1653

Examiner:

Commissioner for Patents  
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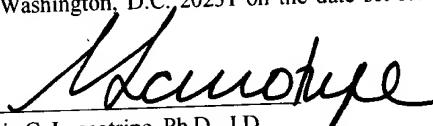
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September 13, 2001

Date of Signature and of Mail Deposit

By:

  
Maria C. Laccotripe, Ph.D., J.D.

Limited Recognition Under 37 CFR § 10.9(b)  
Attorney for Applicant

INFORMATION DISCLOSURE STATEMENT

Dear Sir:

For the Examiner's convenience in reviewing this continuation application, the Applicant submits a consolidated PTO Form 1449, listing all references cited during the prosecution of the parent application. The present application is a continuation-in-part of U.S. Serial No. 09/566,588, filed May 8, 2000 (Atty. Docket No. MNI-080). All references listed on the enclosed PTO Form 1449 have been previously cited by or submitted to the Office in the prior application, and, in accordance with 37 CFR §1.98(d), copies of the references are not enclosed but will be provided upon request.

This statement is not to be interpreted as a representation that the cited publications are material, that an exhaustive search has been conducted, or that no other relevant information exists. Nor shall the citation of any publication herein be construed *per se* as a representation that such publication is prior art. Moreover, Applicant understands that the Examiner will make an independent evaluation of the cited publications.

Under 37 CFR § 1.97(b)(3), no additional costs are believed to be due in connection with the filing of this disclosure. If, however, a first Office Action on the merits issues in this application bearing a mailing date prior to the date of this Information Disclosure Statement, please charge the appropriate fee as required under 37 CFR §1.17(p) to our Deposit Order Account No. 12-0080.

Respectfully submitted,  
LAHIVE & COCKFIELD, LLP

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Date: September 13, 2001

GAD/AEM/RKN/hac

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REV 7-80

U.S. DEPARTMENT OF  
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PATENT AND TRADEMARK OFFICE

ATTY DOCKET NO

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LIST OF PUBLICATIONS CITED BY APPLICANT  
(Use several sheets if necessary)

U.S. PATENT DOCUMENTS				NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
EXAMINER INITIAL		DOCUMENT NUMBER	DATE				

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
	A1	WO 98/36771	08/98	PCT			
	A2	WO 99/15545	04/99	PCT			
	A3	WO 99/15660	04/99	PCT			
	A4	WO 99/48921	09/99	PCT			
	A5	EP 0 950 711	10/99	EPO			
	A6	WO 99/63088	12/99	PCT			
	A7	WO 00/04140	01/00	PCT			
	A8	WO 00/12708	03/00	PCT			
	A9	WO 00/15796	03/00	PCT			
	A10	WO 00/15797	03/00	PCT			

## OTHERS (including Author, Title, Date, Pertinent Pages, Etc.)

A11	Ashburner, M. et al. "An Exploration of the Sequence of a 2.9-Mb Region of the Genome of <i>Drosophila melanogaster</i> : The <i>Adh</i> Region" <i>Genetics</i> 153:179-219 (Sep 1999);
A12	Copy of BLAST Search (Patent_2/gsnuc database) using the hLGR6 nucleotide sequence;
A13	Copy of BLAST Search (Patent_2/PatentDbPreviewNuc database) using the hLGR6 nucleotide sequence;
A14	Copy of BLAST Search (Patent_2 /FastAlert_N.txt database) using the hLGR6 nucleotide sequence;
A15	Copy of BLAST Search (Patent_2 /FastAlert_P.txt database) using the hLGR6 amino acid sequence;
A16	Copy of BLAST Search (Patent_2 /gsprot database) using the hLGR6 amino acid sequence;
A17	Copy of BLAST Search (NRN/nuc database) using the hLGR6 nucleotide sequence;
A18	Copy of BLAST Search (NRP/prot database) using the hLGR6 amino acid sequence;
A19	DGENE Accession No. 1998N-V56989 for Human sperm surface protein I-23 cDNA;
A20	DGENE Accession No. 1999P-W93889 for Human HG38 protein;
A21	DGENE Accession No. 1999P-W93890 for Human HG38 protein;
Examiner	Date Considered
*EXAMINER:	Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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## OTHERS (including Author, Title, Date, Pertinent Pages, Etc.)

	B1	DGENE Accession No. 1999P-W93904 for Human AOMF05 protein;
	B2	DGENE Accession No. 1999P-W93905 for Human AOMF05 protein;
	B3	DGENE Accession No. 1999P-W93906 for Human AOMF05 protein;
	B4	DGENE Accession No. 1999P-W93965 for Human AOMF05 protein;
	B5	DGENE Accession No. 1999N-X23980 for Human HG38 DNA;
	B6	DGENE Accession No. 1999N-X23981 for Human HG38 protein;
	B7	DGENE Accession No. 1999P-Y42168 for Human LGR4 protein sequence;
	B8	DGENE Accession No. 1999P-Y42169 for Human LGR5 protein sequence;
	B9	DGENE Accession No. 1999P-Y53574 for Human gonadotropin receptor partial sequence # 4;
	B10	DGENE Accession No. 1999P-Y53575 for Human gonadotropin receptor partial sequence # 5;
	B11	DGENE Accession No. 1999N-Z25343 for Human LGR4 nucleotide sequence;
	B12	DGENE Accession No. 1999N-Z25344 for Human LGR5 nucleotide sequence;
	B13	DGENE Accession No. 1999N-Z40457 for Human gonadotropin receptor partial coding sequence # 1;
	B14	DGENE Accession No. 1999N-Z40460 for Human gonadotropin receptor partial coding sequence # 4;
	B15	DGENE Accession No. 1999N-Z40461 for Human gonadotropin receptor partial coding sequence # 5;
	B16	DGENE Accession No. 1999N-Z40463 for Human gonadotropin receptor partial coding sequence # 7;

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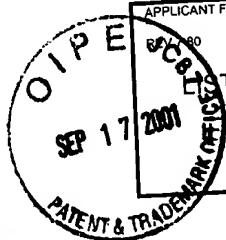
## OTHERS (including Author, Title, Date, Pertinent Pages, Etc.)

C1	Dohlman, Henrik G. "Model Systems for the Study of Seven-Transmembrane-Segment Receptors" <i>Annu. Rev. Biochem.</i> 60:653-688 (1991);
C2	Dufau, Maria L. "The Luteinizing Hormone Receptor" <i>Annu. Rev. Physiol.</i> 60:461:96 (1998);
C3	GenBank Accession No. AF061444 for Homo sapiens G protein-coupled receptor LGR5 (LGR5) mRNA;
C4	GenBank Accession No. AF061443 for Rattus norvegicus G protein-coupled receptor LGR4 (LGR4) mRNA;
C5	GenBank Accession No. AF062006 for Homo sapiens orphan G protein-coupled receptor HG38 mRNA;
C6	GenBank Accession No. AF088074 for Homo sapiens full length insert cDNA clone ZD96C01;
C7	GenBank Accession No. P35379 for Follicle stimulating hormone receptor precursor (FSH-R) (Folitropin receptor);
C8	GenBank Accession No. P49059 for Follicle stimulating hormone receptor precursor (FSH-R) (Folitropin receptor);
C9	GenBank Accession No. P47799 for Follicle stimulating hormone receptor precursor (FSH-R) (Folitropin receptor);
C10	GenBank Accession No. AAB07030 for FSH-TSH;
C11	GenBank Accession No. AAF44846 for hypothetical protein [Drosophila melanogaster];
C12	GenBank Accession No. G51804 for SHGC-79247 Human Homo sapiens STS genomic, sequence tagged site;
C13	GenBank Accession No. AF110818 for Mus musculus orphan G protein-coupled receptor FEX mRNA;
C14	GenBank Accession No. AAC77910 for G protein-coupled receptor LGR4 [Rattus norvegicus];
C15	GenBank Accession No. JG0193 for G protein-coupled receptor FEX - mouse;
C16	GenBank Accession No. AAD14684 for orphan G protein-coupled receptor FEX [Mus musculus];

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## OTHERS (including Author, Title, Date, Pertinent Pages, Etc.)

D1	GenBank Accession No. AAC77911 for G protein-coupled receptor LGR5 [Homo sapiens];
D2	GenBank Accession No. AAC28019 for orphan G protein-coupled receptor HG38 [Homo sapiens];
D3	Gutkind, J. Silvio "The Pathways Connecting G Protein-coupled Receptors to the Nucleus through Divergent Mitogen-activated Protein Kinase Cascades" <i>The Journal of Biological Chemistry</i> 273(4):1839-1842 (Jan 23 1998);
D4	Hermey, G. et al. "Identification of a Novel Seven-Transmembrane Receptor with Homology to Glycoprotein Receptors and Its Expression in the Adult and Developing Mouse" <i>Biochemical and Biophysical Research Communications</i> 254:273-279 (1999);
D5	Holtzman, E.J. et al. "A Null mutation in the vasopressin V2 receptor gene (AVPR2) associated with nephrogenic diabetes insipidus in the Hopewell kindred" <i>Human Molecular Genetics</i> 2(8):1201-1204 (1993);
D6	Hsu, S.Y. et al. "Characterization of Two LGR Genes Homologous to Gonadotropin and Thyrotropin Receptors with Extracellular Leucine-Rich Repeats and a G Protein-Coupled, Seven-Transmembrane Region" <i>Molecular Endocrinology</i> 12:1830-1845 (1998);
D7	Ji, T.H. et al. "Interaction, Signal Generation, Signal Divergence, and Signal Transduction of LH/CG and the Receptor" <i>Recent Progress in Hormone Research</i> 52:431-454 (1997);
D8	Jüppner, H. et al. "A G Protein-Linked Receptor for Parathyroid Hormone and Parathyroid Hormone-Related Peptide" <i>Science</i> 254:1024-1026 (Nov 15 1991);
D9	Khan, H. et al. "Cloning of Alternately Spliced mRNA Transcripts Coding for Variants of Ovine Testicular Follitropin Receptor Lacking the G Protein Coupling Domains" <i>Biochemical and Biophysical Research Communications</i> 190(3):888-894 (Feb 15 1993);
D10	Klein, P.S. et al. "A Chemoattractant Receptor Controls Development in <i>Dictyostelium discoideum</i> " <i>Science</i> 241:1467-1472 (Sep 16 1988);
D11	Kohn, L.D. et al. "The Thyrotropin Receptor" <i>Vitamins and Hormones</i> 50:287-384 (1995);
D12	Kurjan, Janet "Pheromone Response in Yeast" <i>Annu. Rev. Biochem.</i> 61:1097-1129 (1992);
D13	Lin, H.Y. et al. "Expression Cloning of an Adenylate Cyclase-Coupled Calcitonin Receptor" <i>Science</i> 254:1022-1024 (Nov 15 1991);
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U.S. PATENT DOCUMENTS

FOREIGN PATENT DOCUMENTS

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						YES      NO

OTHERS (including Author, Title, Date, Pertinent Pages, Etc.)

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	E1	McDonald, T. et al. "Identification and Cloning of an Orphan G Protein-Coupled Receptor of the Glycoprotein Hormone Receptor Subfamily" <i>Biochemical and Biophysical Research Communications</i> 247:266-270 (1998);
	E2	McKusick, V.A. et al. "The morbid anatomy of the human genome: chromosomal location of mutations causing disease" <i>J. Med. Genet.</i> 30:1-26 (1993);
	E3	Nakanishi, Shigetada "Molecular Diversity of Glutamate Receptors and Implications for Brain Function" <i>Science</i> 258:597-603 (Oct 23 1992);
	E4	Nathans, J. et al. "Molecular Genetics of Human Visual Pigments" <i>Annu. Rev. Genet.</i> 26:403-424 (1992);
	E5	Remy, J-J. et al. "The porcine follitropin receptor: cDNA cloning, functional expression and chromosomal localization of the gene" <i>Gene</i> 163:257-261 (1995);
	E6	Robert, P. et al. "Cloning and Sequencing of the Equine Testicular Follitropin Receptor" <i>Biochemical and Biophysical Research Communications</i> 201(1):201-207 (May 30 1994);
	E7	Selbie, L.A. et al. "G protein-coupled-receptor cross-talk: the fine-tuning of multiple receptor-signalling pathways" <i>TiPS</i> 19:87-93 (Mar 1998);
	E8	Simoni, M. et al. "The Follicle-Stimulating Hormone Receptor: Biochemistry, Molecular Biology, Physiology, and Pathophysiology" <i>Endocrine Reviews</i> 18(6):739-773 (1997);
	E9	Spiegel, A.M. et al. "Abnormalities in G Protein-coupled Signal Transduction Pathways in Human Disease" <i>The Journal of Clinical Investigation</i> 92:1119-1125 (Sep 1993);
	E10	Strader, C.D. et al. "Structure and Function of G Protein-coupled Receptors" <i>Annu. Rev. Biochem.</i> 63:101-132 (1994);
	E11	Yarney, T.A. et al. "Molecular cloning and expression of the ovine testicular follicle stimulating hormone receptor" <i>Molecular and Cellular Endocrinology</i> 93:219-226 (1993).

**Examiner**

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